
Executive Summary

The *Savannah River Site Environmental Report for 2006* (WSRC–TR–2007–00008) is prepared for the U.S. Department of Energy (DOE) according to requirements of DOE Order 231.1A, “Environment, Safety and Health Reporting,” and DOE Order 5400.5, “Radiation Protection of the Public and Environment.” The report’s purpose is to

- present summary environmental data that characterize site environmental management performance
- confirm compliance with environmental standards and requirements
- highlight significant programs and efforts
- assess the impact of SRS operations on the public and the environment

Minimal Impact

SRS posted another strong environmental compliance record in 2006, as its operations continued to result in minimal impact to the offsite public and the surrounding environment. The site’s radioactive and chemical discharges to air and water were well below regulatory maximums for environmental and public health protection; its air and water quality met appropriate requirements; and the radiation dose from its discharges was smaller than natural background doses or safety-based dose standards.

The largest radiation dose that an offsite, hypothetical, maximally exposed individual could have received from SRS operations during 2006 was estimated to be 0.20 millirem—0.11 millirem from the airborne pathways plus 0.09 millirem from the liquid pathway. (A millirem is a standard unit of measure for radiation exposure.) The 2006 SRS dose is just 0.20 percent of the DOE all-pathway dose standard of 100 millirem per year, and far less than the natural average dose of about 300 millirem per year to people in the United States. The 2006 dose is more than the 2005 all-pathway dose of 0.13 millirem because of greater estimated diffuse and fugitive releases of unspecified alpha- and beta-emitters—primarily from a specific remediation project, General Separations Area Consolidated Unit. Because this project was completed in 2006, its source term will not be a factor in future dose calculations. By definition, diffuse and fugitive releases cannot be measured but are conservatively estimated based on the inventory of residual radionuclides in waste sites being remediated.

Extensive Monitoring; Documented Compliance

Environmental monitoring is conducted extensively within a 2,000-square-mile network extending 25 miles from SRS, with some monitoring performed as far as 100 miles from the site. The area includes neighboring cities, towns, and counties in Georgia and South Carolina. Thousands of samples of air, rainwater, surface water, drinking water, groundwater, food products, wildlife, soil, sediment, and vegetation are collected by SRS

and state authorities and analyzed for the presence of radioactive and nonradioactive contaminants.

Compliance with environmental regulations and with DOE orders related to environmental protection provides assurance that onsite processes do not impact the public or the environment adversely. Such compliance is documented in this report.

SRS had a National Pollutant Discharge Elimination System (NPDES) compliance rate of 99.94 percent in 2006—only slightly lower than the 99.97 percent rate reported in 2005. The NPDES program protects streams, reservoirs, and other wetlands by limiting the release of nonradiological pollution into surface waters. Discharge limits are set for each facility to ensure that SRS operations do not negatively impact aquatic life or degrade water quality.

Two Notices of Violation

After a 20-month run of operations with no notices of violation (NOVs) from SCDHEC, SRS received two NOVs in 2006—both under the Clean Water Act. The first was received June 6 for the March 2 and March 10 exceedances of the monthly average and daily maximum limits for ammonia at the site's NPDES Outfall G-10. Because SRS reported and explained the exceedances in its March Discharge Monitoring Report (DMR), no formal response to the NOV was required, and no fines or penalties were issued. The site took steps to prevent recurrence of the ammonia exceedances, and sample analyses conducted since implementation of the corrective actions have shown the G-10 outfall to be within permit compliance.

The second NOV was received November 2 for exceeding the August monthly average discharge limit for lead at NPDES Outfall F-08. Because the site reported this exceedance in its August DMR, no formal response was required, and no fines or penalties were issued. The issue was addressed by rerouting flows and taking offline certain equipment/piping that had been restarted and was causing the lead exceedance.

Wide Distribution

SRS environmental reports have been produced for more than 50 years. Copies are distributed to government officials, universities, public libraries, environmental and civic groups, news media, and interested individuals.